

# What do climate change, respiratory health, and the childhood obesity question have in common?

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# Presentation Outline

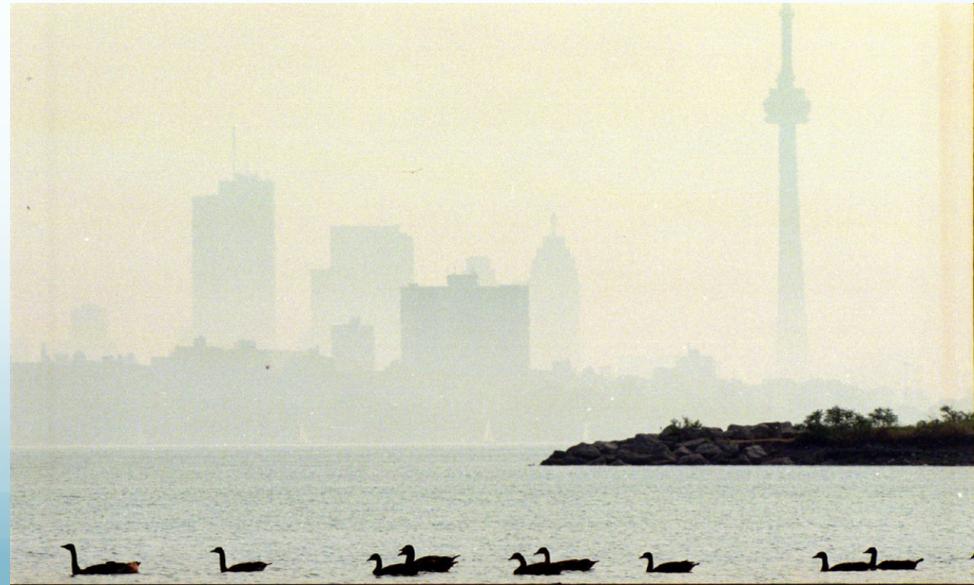
- Context
- Objectives
- Methods
- Preliminary Results
- Next Steps and Implications

# Research Context

- Worldwide asthma prevalence increasing
- Most common chronic disease among children worldwide (WHO 2015)
- Most common chronic respiratory disease in Canada (Crighton et al 2012)
  - Over 2 million Canadians are diagnosed (Statistics Canada 2013)
  - 13% of Canadian children (Asthma Society of Canada 2012)

# Research Context

- Complete etiology of asthma unknown
- Urban regions vulnerable to poor outdoor air quality
  - Anticipated future climate change
- Children particularly vulnerable



# Research Context

- Allergic disease linked to obesity and overweight
  - Generally less physically active
  - Unique physical, psychological and social challenges
- Increasing rates of obesity and overweight growing public health concerns
  - 11.7% of Canadian children aged 5-17 years obese
  - 19.8.% children overweight (Roberts et al 2012)
- Physical activity participation key to reduce future chronic disease burden in Canada

# Research Context

- Engaging children in organized team sport to encourage healthy lifestyles
  - Physical, social, mental benefits
- Over half of Canadian children participate in organized sport (Clark 2008)
- ~ 1.8 million Canadians coach youth sport (Clean Air Champions 2011)
  - Manage health risks
  - Many volunteers with little training in child development, environmental or health issues



# Research Context

- Role of coach behaviour in athlete enjoyment, performance and health and wellbeing
  - 30% of youth report coach actions as reason for quitting sport (Merkel 2013)
- For athletes with allergic disease, team sport environment presents important setting for management



# Research Objectives

- 1) To explore the perceptions and lived experiences of youth team sport athletes diagnosed with asthma (and their parents),
- 2) To investigate the perceptions and concerns of youth team sport coaches with respect to asthmatic athletes and asthma management in team sport, and;
- 3) To understand child and coach-identified coping strategies.

# Methods

- Semi-structured in-depth interviews
- Youth team sport users and providers
  - Players (aged 12-18) and their parent(s) (n=11)
  - Coaches of teams aged 18 and under (n=18)
  - Indoor and outdoor sports
- October 2013-August 2014
- Interviews transcribed verbatim; data organized using NVivo for Mac for thematic analysis

# Study Region



# Preliminary Results

## DATA OVERVIEW

Total interviews	n=29
Coach participants	n=18
Player participants	n=11

## PRIMARY SPORT INVOLVEMENT

- Soccer, n=17
- Hockey, n=4
- Basketball, n=2
- Ringette, n=2
- Baseball, curling, cycling, volleyball, n=1 each

# Preliminary Results

## Coach Overview (n=18)

- 1 recreational, 11 competitive, 6 both
- 11 male, 7 female, 11 with children
- 8 Head Coaches, 4 Assistant Coaches, 6 both
- 3 coach males, 11 coach females, 4 coach both
- 17 with coaching qualifications, 9 with medical qualifications

## Player Overview (n=11)

- 2 recreational, 9 competitive
- 6 male, 5 female
- Born 1995 to 2002
- In addition to asthma, participants affected by allergies:
  - grass (n=4), animals (n=4), ragweed (n=3), peanuts (n=2), tree nuts, (n=1), egg (n=1), dairy (n=1)

# Preliminary Results:

## Knowledge - Coaches

- Symptoms: shortness of breath, wheezing, coughing, often related to personal experiences with asthma
- Triggers: exercise, air quality, temperature, seasonal change
- Interaction with asthmatic/allergic athletes

“For me, it quality in terms of air in the environment, I was just coughing, wheezing, just along with the asthma and just physical attacks, and just gasping” (Coach 1, Baseball)

# Preliminary Results:

## Knowledge - Players

- Shortness of breath identified by every participant, wheezing, coughing
- Exercise, air quality & temperature

“Player: I don’t honestly know what could trigger asthma for me. It was running really fast, like as quick as I could... For me, I don’t know any other reasons why asthma would be triggered.

Parent: More so in the heat?  
Not so much in the cold. Right?

Player: Yea. The heat I guess because it is making you sweat more, even though you might just be sitting outside. You could still get asthma due to heat.” (Player 10)

# Preliminary Results:

## Attitudes - Coaches

- Potential for bullying
- Asthma identified as 'weakness', doubtful of symptoms
- Players hide symptoms

"I think there is kind of like a culture of, especially with teenagers, making fun of anything, but if a kid pulls out his puffer, so you get the wheezing jokes, and you kind of see him like the way it is depicted in pop culture. The kids with asthma are the never see anybody use sports, and then obviously not that everyone believes that, it is what gives for teenagers to make jokes about" (Coach 2, Soccer)

(Coach 1, Baseball)

# Preliminary Results:

## Attitudes - Players

- Frustration/disappointment
- Fear of stigma/losing playing time
- Hide symptoms

“Player: Researcher: What are you going to be worried about? You don't feel like you can't go to play?”

back on, what does that  
Researcher: Did you experience that kind of thing, if you were suffering that they would put you on the bench?

Parent: Yea and I know that from when it is kind of disappointing because I like playing in the game.”  
Player: It is kind of disappointing because I like playing in the game.”  
Player: I need the rescue inhaler” (Player 1)

# Preliminary Results: Practices

- Players self-manage, use of emergency puffer, water breaks
- Increasing fitness
- No coach or player identified use of personalized Asthma Action Plan

“My first year [Jen’s] parents said, ‘Oh, she has got asthma,’ but through that winter session, we did the running and then which they used once that first season that we played they could not believe the difference ... it improved. She didn’t go down in games like the year prior... sometimes [it’s a] lack of physical fitness.” (Coach 2, Soccer)

“Well, the only thing I ever noticed, they had a puffer on the bench in a while (Coach 18, Hockey).”

# Preliminary Results: Barriers to Participation

- Allergic disease identified as barrier to participation and high performance
- Players hide symptoms from teammates, others use support network of team
- Lack of knowledge/need for awareness identified by coaches and athletes

"I have 3 or 4 of them, any other girls on your team or that have could, I feel like teams you've played on in you feel better about your asthma." (Researcher)

Player: "I guess if people were more aware.. that don't have it." Coach 11.

Player: "Yes, there was another girl who had asthma too. I would help her with her breathing. She would help me, just walk a mile in those shoes, you don't really know, I mean you have no idea." (Player 5)

# Next Steps and Implications

- Coach and player behaviours could increase risk in already vulnerable population
- Calls for increased awareness of asthma (social dynamics, management)
- Evaluation of Air Aware Coach Education Tool



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